

American Journal of Physiology: Gastrointestinal and Liver Physiology

No. 1. JULY 1998

THEMES

G Protein-Coupled Receptors in Gastrointestinal Physiology

IV. Neural regulation of gastrointestinal smooth muscle
K. M. Sanders

G1

Neural Injury, Repair, and Adaptation in the GI Tract

II. The elusive action of capsaicin on the vagus nerve
P. Holzer

G8

MUCOSAL BIOLOGY

Altered sodium-hydrogen exchange activity is a mechanism for acid-induced hyperproliferation in Barrett's esophagus

R. C. Fitzgerald, M. B. Omary, and G. Triadafilopoulos

G47

Short-chain fatty acids inhibit intestinal trefoil factor gene expression in colon cancer cells

C. P. Tran, M. Familiari, L. M. Parker, R. H. Whitehead, and A. S. Giraud

G85

Characterization of rat epimorphin/syntaxin 2 expression suggests a role in crypt-villus morphogenesis

A. Goyal, R. Singh, E. A. Swietlicki, M. S. Levin, and D. C. Rubin

G114

Kinetics of particle uptake in the domes of Peyer's patches

R. Beier and A. Gebert

G130

INFLAMMATION/IMMUNITY/MEDIATORS

CD4⁺ T cells mediate superantigen-induced abnormalities in murine jejunal ion transport

D. M. McKay, M. A. Benjamin, and J. Lu

G29

Substance P receptor expression in intestinal epithelium in *Clostridium difficile* toxin A enteritis in rats

C. Pothoulakis, I. Castagliuolo, S. E. Leeman, C.-C. Wang, H. Li, B. J. Hoffman, and E. Mezey

G68

Histamine stimulates ion transport by dog pancreatic duct epithelial cells through H₁ receptors

T. D. Nguyen, C. N. Okolo, and M. W. Moody

G76

HORMONES AND SIGNALING

Secretin inhibits gastric acid secretion via a vagal afferent pathway in rats

P. Li, T. M. Chang, and W. Y. Chey

G22

Identification of a domain in the carboxy terminus of CCK receptor that affects its intracellular trafficking

W. Y. Go, E. L. Holicky, E. M. Hadac, R. V. Rao, and L. J. Miller

G56

Secretory effects of ATP on nontransformed dog pancreatic duct epithelial cells

T. D. Nguyen, M. W. Moody, C. E. Savard, and S. P. Lee

G104

Origin of molecular species of diacylglycerol induced by bombesin in smooth muscle cells from rabbit rectosigmoid

D. Sbrissa, A. Hajra, and K. N. Bitar

G138

IGF-I stimulates intestinal muscle cell growth by activating distinct PI 3-kinase and MAP kinase pathways

J. F. Kuemmerle and T. L. Bushman

G151

NEUROREGULATION AND MOTILITY

Mucosal mast cells are involved in CCK disruption of MMC in the rat intestine
C. Juanola, M. Giralt, M. Jiménez, M. Mourelle, and P. Vergara G63

Interaction between neurokinin A, VIP, prostanoids, and enteric nerves in regulation of duodenal function
A. Häggren, G. Flemström, and O. Nylander G95

Involvement of intracellular Ca^{2+} stores in inhibitory effects of NO donor SIN-1 and cGMP
H. Franck, M. Storr, A. Puschmann, V. Schusdziarra, and H.-D. Allescher G159

Gastric emptying flow curves separated from carbon-labeled octanoic acid breath test results
B. D. Maes, G. Mys, B. J. Geypens, P. Evenepoel, Y. F. Ghoos, and P. J. Rutgeerts G169

LIVER AND BILIARY TRACT

Changes in methionine adenosyltransferase during liver regeneration in the rat
Z.-Z. Huang, Z. Mao, J. Cai, and S. C. Lu G14

LPS receptor CD14 participates in release of $\text{TNF-}\alpha$ in RAW 264.7 and peritoneal cells but not in Kupffer cells
S. N. Lichtman, J. Wang, and J. J. Lemasters G39

S-adenosylmethionine deficiency and $\text{TNF-}\alpha$ in lipopolysaccharide-induced hepatic injury
R. K. Chawla, W. H. Watson, C. E. Eastin, E. Y. Lee, J. Schmidt, and C. J. McClain G125

No. 2. AUGUST 1998

THEMES

G Protein-Coupled Receptors in Gastrointestinal Physiology

V. Gastrointestinal peptide signaling through tyrosine phosphorylation of focal adhesion proteins
E. Rozengurt G177

Neural Injury, Repair, and Adaptation in the GI Tract

III. Role of the RET signal transduction pathway in development of the mammalian enteric nervous system
V. Pachnis, P. Durbec, S. Taraviras, M. Grigoriou, and D. Natarajan G183

EXPEDITED ARTICLE

Soluble ICAM-1 reduces leukocyte adhesion to vascular endothelium in ischemia-reperfusion injury in mice

K. Kusterer, J. Bojunga, M. Enghofer, E. Heidenthal, K. H. Usadel, H. Kolb, and S. Martin G377

MUCOSAL BIOLOGY

Developmental expression of a mucinlike glycoprotein (MUCLIN) in pancreas and small intestine of CF mice

R. C. De Lisle, M. Pettitt, K. S. Isom, and D. Ziemer G219

Early dietary experience influences ontogeny of intestine in response to dietary lipid changes in later life

E. Jarocka-Cyrtka, N. Perin, M. Keelan, E. Wierzbicki, T. Wierzbicki, M. T. Clandinin, and A. B. R. Thomson G250

Water immersion-restraint stress induces expression of immediate-early genes in gastrointestinal tract of rats

T. Ueyama, M. Saika, C. Koreeda, and E. Senba G287

Duodenal Ca^{2+} absorption is not stimulated by calcitriol during early postnatal development of pigs <i>B. Schroeder, M. R. Dahl, and G. Breves</i>	G305
Role of calcium in adaptive cytoprotection and cell injury induced by deoxycholate in human gastric cells <i>E. R. Kokoska, G. S. Smith, A. B. Wolff, Y. Deshpande, C. L. Rieckenberg, A. Banan, and T. A. Miller</i>	G322
A polyamine pathway-mediated mitogenic mechanism in enterochromaffin-like cells of <i>Mastomys</i> <i>M. Kidd, L. H. Tang, S. W. Schmid, K. Miu, and I. M. Modlin</i>	G370
INFLAMMATION/IMMUNITY/MEDIATORS	
Postischemic inflammation: a role for mast cells in intestine but not in skeletal muscle <i>S. Kanwar, M. J. Hickey, and P. Kubes</i>	G212
HORMONES AND SIGNALING	
Modulation of secretin release by neuropeptides in secretin-producing cells <i>C. H. Chang, W. Y. Chey, B. Erway, D. H. Coy, and T.-M. Chang</i>	G192
Signal transduction pathways mediating CCK-induced gallbladder muscle contraction <i>P. Yu, Q. Chen, Z. Xiao, K. Harnett, P. Biancani, and J. Behar</i>	G203
Rat serum induces a differentiated phenotype in a rat parotid acinar cell line <i>Y. Zhu, J. M. Aletta, J. Wen, X. Zhang, D. Higgins, and R. P. Rubin</i>	G259
Calcium signaling in cultured human and rat duodenal enterocytes <i>C. S. Chew, B. Säfsten, and G. Flemström</i>	G296
Expression of endothelial nitric oxide synthase in human and rabbit gastrointestinal smooth muscle cells <i>B.-Q. Teng, K. S. Murthy, J. F. Kuemmerle, J. R. Grider, K. Sase, T. Michel, and G. M. Makhlouf</i>	G342
Intra-acinar cell activation of trypsinogen during caerulein-induced pancreatitis in rats <i>B. Hofbauer, A. K. Saluja, M. M. Lerch, L. Bhagat, M. Bhatia, H. S. Lee, J. L. Frossard, G. Adler, and M. L. Steer</i>	G352
NEUROREGULATION AND MOTILITY	
Biomechanical and sensory parameters of the human esophagus at four levels <i>R. S. Patel and S. S. C. Rao</i>	G187
Gastric mechanosensory and lower esophageal sphincter function in rumination syndrome <i>M. Thumshirn, M. Camilleri, R. B. Hanson, D. E. Williams, A. J. Schei, and P. P. Kammer</i>	G314
Autonomic nervous control of venous pressure and secretion in submandibular gland of anesthetized dogs <i>M. A. Lung</i>	G331
Determination of lingual myoarchitecture in whole tissue by NMR imaging of anisotropic water diffusion <i>R. J. Gilbert, T. G. Reese, S. J. Daftary, R. N. Smith, R. M. Weisskoff, and V. J. Wedeen</i>	G363
LIVER AND BILIARY TRACT	
Estimation of specific hepatic arterial water space <i>S. Sahin and M. Rowland</i>	G228
Sterol carrier protein-2 expression increases NBD-stearate uptake and cytoplasmic diffusion in L cells <i>E. J. Murphy</i>	G237
L-FABP and I-FABP expression increase NBD-stearate uptake and cytoplasmic diffusion in L cells <i>E. J. Murphy</i>	G244
Cytokines induce NF- κ B in activated but not in quiescent rat hepatic stellate cells <i>C. Hellerbrand, C. Jobin, L. L. Licato, R. B. Sartor, and D. A. Brenner</i>	G269
Mechanisms of ferric citrate uptake by human hepatoma cells <i>D. Trinder and E. Morgan</i>	G279

THEMES

Neural Injury, Repair, and Adaptation in the GI Tract

IV. Pathophysiology of GI motility related to interstitial cells of Cajal
J. D. Huizinga

G381

Mechanisms of Hepatic Toxicity

I. TNF-induced liver injury
C. A. Bradham, J. Plümpe, M. P. Manns, D. A. Brenner, and C. Trautwein

G387

EXPEDITED ARTICLE

iNOS expression in human intestinal microvascular endothelial cells inhibits leukocyte adhesion

D. G. Binion, S. Fu, K. S. Ramanujam, Y. C. Chai, R. A. Dweik, J. A. Drazba, J. G. Wade, N. P. Ziats, S. C. Erzurum, and K. T. Wilson

G592

MUCOSAL BIOLOGY

Regulation of PC4/TIS7 expression in adapting remnant intestine after resection
D. C. Rubin, E. A. Swietlicki, J. L. Wang, and M. S. Levin

G506

Adsorptive-mediated endocytosis of a basic peptide in enterocyte-like Caco-2 cells
Y. Sai, M. Kajita, I. Tamai, J. Wakama, T. Wakamiya, and A. Tsuji

G514

Transforming growth factor- β inhibits proliferation and maturation of cultured guinea pig gastric pit cells
K. Rokutan, M. Yamada, J. Torigoe, and T. Saito

G526

Strain induces Caco-2 intestinal epithelial proliferation and differentiation via PKC and tyrosine kinase signals
O. Han, G. D. Li, B. E. Sumpio, and M. D. Basson

G534

Induction of endothelin-1 synthesis by IL-2 and its modulation of rat intestinal epithelial cell growth
T. Shigematsu, S. Miura, M. Hirokawa, R. Hokari, H. Higuchi, N. Watanabe, Y. Tsuzuki, H. Kimura, S. Tada, R. C. Nakatsumi, H. Saito, and H. Ishii

G556

Expression of intestinal brush-border membrane hydrolases and ferritin after segmental ischemia-reperfusion in rats
K.-Y. Yeh, M. Yeh, and J. Glass

G572

INFLAMMATION/IMMUNITY/MEDIATORS

Bacteria rapidly colonize and modulate healing of gastric ulcers in rats
S. N. Elliott, A. Buret, W. McKnight, M. J. S. Miller, and J. L. Wallace

G425

Effects of endotoxin on gastric injury from luminal irritants in rats: potential roles of nitric oxide
D. W. Mercer, A. A. Castaneda, J. W. Denning, L. Chang, and D. H. Russell

G449

PAF and CD18 mediate neutrophil infiltration in upper gastrointestinal tract during intra-abdominal sepsis
A. J. Beyer, D. M. Smalley, Y.-M. Shyr, J. G. Wood, and L. Y. Cheung

G467

Unique mechanism of inhibition of Na^+ -amino acid cotransport during chronic ileal inflammation
U. Sundaram, S. Wisel, and J. J. Fromkes

G483

Enteroinvasive bacteria directly activate expression of iNOS and NO production in human colon epithelial cells
T. Witthöft, L. Eckmann, J. M. Kim, and M. F. Kagnoff

G564

Migration of intestinal intraepithelial lymphocytes into a polarized epithelial monolayer
S. K. Shaw, A. Hermanowski-Vosatka, T. Shibahara, B. A. McCormick, C. A. Parkos, S. L. Carlson, E. C. Ebert, M. B. Brenner, and J. L. Madara

G584

HORMONES AND SIGNALING

Helicobacter pylori-infected human antral primary cell cultures: effect on gastrin cell function

A. Richter-Dahlfors, U. Heczko, R. M. Meloche, B. B. Finlay,
and A. M. J. Buchan

G393

Demonstration and immunolocalization of ATP diphosphohydrolase in the pig digestive system

J. Sévigny, G. Grondin, F.-P. Gendron, J. Roy, and A. R. Beaudoin

G473

Stimulation of oxygen uptake by prostaglandin E₂ is oxygen dependent in perfused rat liver

W. Qu, Z. Zhong, G. E. Arteel, and R. G. Thurman

G542

NEUROREGULATION AND MOTILITY

In vitro evidence that rabbit distal colonic muscularis mucosae has a *Clostridium difficile* toxin A receptor

W. H. Percy, R. Burakoff, K. Rose, H. P. Desai, C. Pothoulakis, and R. Egloff

G402

Effects of rectal distensions on nociceptive flexion reflexes in humans

D. Bouhassira, J.-M. Sabaté, B. Coffin, D. Le Bars, J.-C. Willer, and R. Jian

G410

Differential symptomatic and electrogastrographic effects of distal and proximal human gastric distension

U. Ladabaum, S. S. Koshy, M. L. Woods, F. G. Hooper, C. Owyang,
and W. L. Hasler

G418

Guinea pig 5-HT transporter: cloning, expression, distribution, and function in intestinal sensory reception

J.-X. Chen, H. Pan, T. P. Rothman, P. R. Wade, and M. D. Gershon

G433

Differential effects of amitriptyline on perception of somatic and visceral stimulation in healthy humans

A. B. Gorelick, S. S. Koshy, F. G. Hooper, T. C. Bennett, W. D. Chey,
and W. L. Hasler

G460

Organization of intrinsic cholinergic neurons projecting within submucosal plexus of guinea pig ileum

B. A. Moore and S. Vanner

G490

Differential 5-HT₃ mediation of human gastrocolonic response and colonic peristaltic reflex

E. S. Björnsson, W. D. Chey, U. Ladabaum, M. L. Woods, F. G. Hooper,
C. Owyang, and W. L. Hasler

G498

Pharyngoglottal closure reflex: identification and characterization in a feline model

R. Shaker, B. K. Medda, J. Ren, S. Jaradeh, P. Xie, and I. M. Lang

G521

Capacitative Ca²⁺ entry in enteric glia induced by thapsigargin and extracellular ATP

G. A. Sarosi, D. C. Barnhart, D. J. Turner, and M. W. Mulholland

G550

No. 4. OCTOBER 1998

THEMES

Mechanisms of Hepatic Toxicity

II. Alcoholic liver injury involves activation of Kupffer cells by endotoxin

R. G. Thurman

G605

MUCOSAL BIOLOGY

Indomethacin increases susceptibility to injury in human gastric cells independent of PG synthesis inhibition

E. R. Kokoska, G. S. Smith, Y. Deshpande, A. B. Wolff, and T. A. Miller

G620

Effect of feeding diets of varying fatty acid composition on apolipoprotein expression in newborn swine

H. Wang, F. Hunter, and D. D. Black

G645

Uptake and metabolism of structured triglyceride by Caco-2 cells: reversal of essential fatty acid deficiency <i>J. H. Spalinger, E. G. Seidman, G. Lepage, D. Ménard, V. Gavino, and E. Levy</i>	G652
Effects of sustained flow reduction on postnatal intestinal circulation <i>P. T. Nowicki</i>	G758
INFLAMMATION/IMMUNITY/MEDIATORS	
Persistence of <i>Helicobacter pylori</i> VacA toxin and vacuolating potential in cultured gastric epithelial cells <i>P. Sommi, V. Ricci, R. Fiocca, V. Necchi, M. Romano, J. L. Telford, E. Solcia, and U. Ventura</i>	G681
Monochloramine induced DNA fragmentation in gastric cell line MKN45 <i>H. Suzuki, K. Seto, M. Mori, M. Suzuki, S. Miura, and H. Ishii</i>	G712
Characterization of the 5'-flanking region of the murine polymeric IgA receptor gene <i>M. G. Martín, J. Wang, T. W. H. Li, J. T. Lam, E. M. Gutierrez, R. S. Solorzano-Vargas, and H. V. Tsai</i>	G778
Localization and secretion of tissue kallikrein in peptidoglycan-induced enterocolitis in Lewis rats <i>A. Stadnicki, J. Chao, I. Stadnicka, E. Van Tol, K.-F. Lin, F. Li, R. B. Sartor, and R. W. Colman</i>	G854
A choline-rich diet improves survival in a rat model of endotoxin shock <i>C. A. Rivera, M. D. Wheeler, N. Enomoto, and R. G. Thurman</i>	G862
HORMONES AND SIGNALING	
Immunolocalization of gastrin-dependent histidine decarboxylase activity in rat gastric mucosa during feeding <i>G. V. Ohning, M. Song, H. C. Wong, S. V. Wu, and J. H. Walsh</i>	G660
PPY stimulates synthesis and secretion of intestinal apolipoprotein AIV without affecting mRNA expression <i>T. J. Kalogeris, X. Qin, W. Y. Chey, and P. Tso</i>	G668
Inhibition of Na^+/H^+ exchange stimulates CCK secretion in STC-1 cells <i>V. Prpic, J. G. Fitz, Y. Wang, J. R. Raymond, M. N. Garnovskaya, and R. A. Liddle</i>	G689
Src kinase and PI 3-kinase as a transduction pathway in ceramide-induced contraction of colonic smooth muscle <i>A. I. Ibitayo, Y. Tsunoda, F. Nozu, C. Owyang, and K. N. Bitar</i>	G705
Effect of VIP and PACAP on basal release of serotonin from isolated vascularly and luminally perfused rat duodenum <i>M. Fujimiya, H. Yamamoto, and A. Kuwahara</i>	G731
Regulation of c-Jun NH_2 -terminal kinases in isolated canine gastric parietal cells <i>A. Nagahara, L. Wang, J. Del Valle, and A. Todisco</i>	G740
Involvement of pituitary adenylate cyclase-activating peptide in opossum internal anal sphincter relaxation <i>S. Chakder and S. Rattan</i>	G769
NEUROREGULATION AND MOTILITY	
Protein kinase G expression in the small intestine and functional importance for smooth muscle relaxation <i>A. Huber, P. Trudrung, M. Storr, H. Franck, V. Schusdziarra, P. Ruth, and H.-D. Allescher</i>	G629
Histamine sensitivity of mesenteric afferent nerves in the rat jejunum <i>M. E. Kreis, W. Haupt, A. J. Kirkup, and D. Grundy</i>	G675
Physiological changes in blood glucose affect appetite and pyloric motility during intraduodenal lipid infusion <i>J. M. Andrews, C. K. Rayner, S. Doran, G. S. Hebbard, and M. Horowitz</i>	G797
Distension-related responses in circular and longitudinal muscle of the human esophagus: an ultrasonographic study <i>Y. Yamamoto, J. Liu, T. K. Smith, and R. K. Mittal</i>	G805

Anaphylaxis-induced alterations in intestinal motility: role of extrinsic neural pathways <i>R. B. Scott, D. T. M. Tan, M. Miampamba, and K. A. Sharkey</i>	G812
Neural mediation of vasoactive intestinal polypeptide inhibitory effect on jejunal alanine absorption <i>K. A. Barada, N. E. Saadé, S. F. Atweh, and C. F. Nassar</i>	G822
5-HT activates nitric oxide-generating neurons to stimulate chloride secretion in guinea pig distal colon <i>A. Kuwahara, H. Kuramoto, and M. Kadowaki</i>	G829

LIVER AND BILIARY TRACT

Efficient hepatic uptake and concentrative biliary excretion of a mercapturic acid <i>C. A. Hinchman, J. F. Rebbeck, and N. Ballatori</i>	G612
Binding of [³ H]palmitate to BSA <i>B. M. Elmadhoun, G. Q. Wang, J. F. Templeton, and F. J. Burczynski</i>	G638
Effects of chronic ethanol consumption on cytokine regulation of liver regeneration <i>S. Q. Yang, H. Z. Lin, M. Yin, J. H. Albrecht, and A. M. Diehl</i>	G696
Hepatocellular expression of glucose-6-phosphatase is unaltered during hepatic regeneration <i>W. F. Zakko, C. L. Berg, J. L. Gollan, and R. M. Green</i>	G717
Cystatin A expression reduces bile salt-induced apoptosis in a rat hepatoma cell line <i>B. Jones, P. J. Roberts, W. A. Faubion, E. Kominami, and G. J. Gores</i>	G723
Glutathione depletion is associated with decreased Bcl-2 expression and increased apoptosis in cholangiocytes <i>A. Celli, F. G. Que, G. J. Gores, and N. F. LaRusso</i>	G749
Reduced folate derivatives are endogenous substrates for cMOAT in rats <i>H. Kusuhara, Y.-H. Han, M. Shimoda, E. Kokue, H. Suzuki, and Y. Sugiyama</i>	G789
Endothelin-1 inhibits secretin-stimulated ductal secretion by interacting with ET _A receptors on large cholangiocytes <i>A. Caligiuri, S. Glaser, R. E. Rodgers, J. L. Phinney, W. Robertson, E. Papa, M. Pinzani, and G. Alpini</i>	G835
Rat hepatic stellate cells produce cytokine-induced neutrophil chemoattractant in culture and in vivo <i>J. J. Maher, J. S. Lozier, and M. K. Scott</i>	G847

No. 5. NOVEMBER 1998

THEMES

Neural Injury, Repair, and Adaptation in the GI Tract

V. Genes, lineages, and tissue interactions in the development of the enteric nervous system <i>M. D. Gershon</i>	G869
--	------

Mechanisms of Hepatic Toxicity

III. Intracellular signaling in response to toxic liver injury <i>B. E. Jones and M. J. Czaja</i>	G874
--	------

Genetic Disorders of Membrane Transport

I. Glucose Galactose Malabsorption <i>E. M. Wright</i>	G879
---	------

MUCOSAL BIOLOGY

Role of gap junctions in inhibiting ischemia-reperfusion injury of rat gastric mucosa <i>F. Iwata, T. Joh, F. Ueda, Y. Yokoyama, and M. Itoh</i>	G883
GLP-2 augments the adaptive response to massive intestinal resection in rat <i>R. B. Scott, D. Kirk, W. K. MacNaughton, and J. B. Meddings</i>	G911

Differential expression of EGFR during early reparative phase of the gastric mucosa between young and aged rats

L. Liu, J. R. Turner, Y. Yu, A. J. Khan, R. Jaszewski, S. E. G. Fligiel, and A. P. N. Majumdar

G943

Stress stimulates transepithelial macromolecular uptake in rat jejunum

A. J. Kiliaan, P. R. Saunders, P. B. Bijlsma, M. C. Berin, J. A. Taminiau, J. A. Groot, and M. H. Perdue

G1037

Effects of neurotransmitters, gut hormones, and inflammatory mediators on mucus discharge in rat colon

P. Plaisancié, A. Barcelo, F. Moro, J. Claustre, J.-A. Chayvialle, and J.-C. Cuber

G1073

Dietary flavonol quercetin induces chloride secretion in rat colon

R. Cermak, U. Föllmer, and S. Wolffram

G1166

INFLAMMATION/IMMUNITY/MEDIATORS

Identification and functional importance of IL-1 receptors on rat parietal cells

W. Schepp, K. Dehne, H. Herrmuth, K. Pfeffer, and C. Prinz

G1094

Nitric oxide mediates hepatocyte injury

J. H. Wang, H. P. Redmond, Q. D. Wu, and D. Bouchier-Hayes

G1117

Localization of cyclooxygenase-2 and regulation of its mRNA expression in gastric ulcers in rats

S. Takahashi, J.-I. Shigeta, H. Inoue, T. Tanabe, and S. Okabe

G1137

T lymphocyte-dependent and -independent intestinal smooth muscle dysfunction in the *T. spiralis*-infected mouse

B. A. Vallance, K. Croitoru, and S. M. Collins

G1157

HORMONES AND SIGNALING

Role of insulin and nutritional factors in intestinal glycoprotein fucosylation during postnatal development

M.-C. Biol, D. Lenoir, S. Greco, D. Galvain, I. Hugueny, and P. Louisot

G936

Role of transcellular pathway in ileal Ca^{2+} absorption: stimulation by low- Ca^{2+} diet

D. Auchère, S. Tardivel, J.-C. Gounelle, T. Driueke, and B. Lacour

G951

Central CGRP inhibits pancreatic enzyme secretion by modulation of vagal parasympathetic outflow

Y. Li, Y. C. Jiang, and C. Owyang

G957

Glucagon-like peptide-1 inhibits gastropancreatic function by inhibiting central parasympathetic outflow

A. Wettergren, M. Wøjdemann, and J. J. Holst

G984

Estradiol alters cholecystokinin stimulus-response coupling in rat pancreatic acini

G. T. Blevins Jr., S. S. McCullough, T. N. Wilbert, R. M. Isom, P. Chowdhury, and S. T. Miller

G993

Codistribution of TAP and the granule membrane protein GRAMP-92 in rat caerulein-induced pancreatitis

T. Otani, S. M. Chepilko, J. H. Grendell, and F. S. Gorelick

G999

Zymogen proteolysis within the pancreatic acinar cell is associated with cellular injury

T. Grady, M. Mah'moud, T. Otani, S. Rhee, M. M. Lerch, and F. S. Gorelick

G1010

Different acid secretagogues activate different Na^+/H^+ exchanger isoforms in rabbit parietal cells

O. Bachmann, T. Sonnentag, W.-K. Siegel, G. Lamprecht, A. Weichert, M. Gregor, and U. Seidler

G1085

Capillary diffusion capacity and tissue distribution of pancreatic procolipase in rat

C. Rippe, B. Rippe, and C. Erlanson-Albertsson

G1179

Evidence for NO-redox form of nitric oxide as nitrergic inhibitory neurotransmitter in gut

R. K. Goyal and X. D. He

G1185

Supramaximal CCK and CCh concentrations abolish VIP potentiation by inhibiting adenylyl cyclase activity

T. Akiyama, Y. Hirohata, Y. Okabayashi, I. Imoto, and M. Otsuki

G1202

NEUROREGULATION AND MOTILITY

Rat gastroduodenal motility in vivo: involvement of NO and ATP in spontaneous motor activity <i>I. Glasgow, K. Mattar, and A. Krantis</i>	G889
Rat gastroduodenal motility in vivo: interaction of GABA and VIP in control of spontaneous relaxations <i>A. Krantis, K. Mattar, and I. Glasgow</i>	G897
Scintigraphic measurement of regional gastrointestinal transit in the dog <i>Y. Iwanaga, J. Wen, M. S. Thollander, L. J. Kost, G. M. Thomforde, R. G. Allen, and S. F. Phillips</i>	G904
Functional alterations in jejunal myenteric neurons during inflammation in nematode-infected guinea pigs <i>J. M. Palmer, M. Wong-Riley, and K. A. Sharkey</i>	G922
Gastric motor and cardiovascular effects of insulin in dorsal vagal complex of the rat <i>Z. K. Krowicki, N. A. Nathan, and P. J. Hornby</i>	G964
Regulation of excitatory neural input to longitudinal intestinal muscle by myenteric interneurons <i>J. R. Grider</i>	G973
5-HT ₄ receptor agonists and δ -opioid receptor antagonists act synergistically to stimulate colonic propulsion <i>A. E. Foxx-Orenstein, J.-G. Jin, and J. R. Grider</i>	G979
5-HT is present in nerves of guinea pig sphincter of Oddi and depolarizes sphincter of Oddi neurons <i>K. Hillsley and G. M. Mawe</i>	G1018
Vagal mechanisms underlying gastric protection induced by chemical activation of raphe pallidus in rats <i>H. Kaneko, J. Kaunitz, and Y. Taché</i>	G1056
Cellular pathways of mast cell- and capsaicin-sensitive nerve-evoked ileal submucosal arteriolar dilations <i>L. Atwood, C. James, G. P. Morris, and S. Vanner</i>	G1063
Characterization and mechanisms of the pharyngoesophageal inhibitory reflex <i>I. M. Lang, B. K. Medda, J. Ren, and R. Shaker</i>	G1127
Characterization and splice variants of neuronal nitric oxide synthase in rat small intestine <i>A. Huber, D. Saur, M. Kurjak, V. Schusdziarra, and H.-D. Allescher</i>	G1146
Effects of nitroglycerin on liquid gastric emptying and antrypyloroduodenal motility <i>W.-M. Sun, S. Doran, K. L. Jones, E. Ooi, G. Boeckxstaens, G. S. Hebbard, T. Lingenfelser, J. E. Morley, J. Dent, and M. Horowitz</i>	G1173
A neurokinin-1 receptor antagonist reduced hypersalivation and gastric contractility related to emesis in dogs <i>N. Furukawa, H. Fukuda, M. Hatano, T. Koga, and Y. Shiroshita</i>	G1193
Effect of gastrin on antroduodenal motility: role of intraluminal acidity <i>M. Verkijk, H. A. J. Gielkens, C. B. H. W. Lamers, and A. A. M. Masclee</i>	G1209

LIVER AND BILIARY TRACT

Intracellular pH regulation in bombesin-stimulated secretion in isolated bile duct units from rat liver <i>W. K. Cho, A. Mennone, and J. L. Boyer</i>	G1028
Sorting of rat liver and ileal sodium-dependent bile acid transporters in polarized epithelial cells <i>A.-Q. Sun, M. Ananthanarayanan, C. J. Soroka, S. Thevananther, B. L. Shneider, and F. J. Suchy</i>	G1045
Acute effect of EtOH on Mg ²⁺ homeostasis in liver cells: evidence for the activation of an Na ⁺ /Mg ²⁺ exchanger <i>P. A. Tessman and A. Romani</i>	G1106

THEMES

Mechanisms of Hepatic Toxicity

IV. Pathogenetic mechanisms involved in hepatitis C virus-induced liver diseases

J. Y.-N. Lau

G1217

Genetic Disorders of Membrane Transport

II. Regulation of CFTR by small molecules including HCO_3^-

B. Illek, H. Fischer, and T. E. Machen

G1221

EXPEDITED ARTICLE

Long- and short-term D- α -tocopherol supplementation inhibits liver collagen $\alpha 1(I)$ gene expression

M. Chojkier, K. Houglum, K. S. Lee, and M. Buck

G1480

MUCOSAL BIOLOGY

Developmental regulation of epithelial sodium channel subunit mRNA expression in rat colon and lung

S. Watanabe, K. Matsushita, J. B. Stokes, and P. B. McCray, Jr.

G1227

Rate at which glutamine enters TCA cycle influences carbon atom fate in intestinal epithelial cells

J. Quan, M. D. Fitch, and S. E. Fleming

G1299

Ionizing radiation stimulates muscarinic regulation of rat intestinal mucosal function

F. Lebrun, A. Francois, M. Vergnet, L. Lebaron-Jacobs, P. Gourmelon, and N. M. Griffiths

G1333

Expression of extracellular glutathione peroxidase in human and mouse gastrointestinal tract

D. M. Tham, J. C. Whitin, K. K. Kim, S. X. Zhu, and H. J. Cohen

G1463

INFLAMMATION/IMMUNITY/MEDIATORS

Role of endotoxin in the hypermetabolic state after acute ethanol exposure

C. A. Rivera, B. U. Bradford, V. Seabra, and R. G. Thurman

G1252

Mechanism of inhibition of Na^+ -bile acid cotransport during chronic ileal inflammation in rabbits

U. Sundaram, S. Wisel, S. Stengelin, W. Kramer, and V. Rajendran

G1259

Role of nitric oxide in inflammation-induced suppression of secretion in a mouse model of acute colitis

W. K. MacNaughton, S. S. Lowe, and K. Cushing

G1353

Hepatic oxygen metabolism in porcine endotoxemia: the effect of nitric oxide synthase inhibition

T. Saetre, Y. Gundersen, O. A. Smiseth, T. Scholz, H. Carlsen, L. Nordsletten, P. Lilleaasen, T. Sautner, R. Függer, and A. O. Aasen

G1377

Intrahepatic STAT-3 activation and acute phase gene expression predict outcome after CLP sepsis in the rat

K. M. Andrejko, J. Chen, and C. S. Deutschman

G1423

Intestinal inflammation reduces expression of DRA, a transporter responsible for congenital chloride diarrhea

H. Yang, W. Jiang, E. E. Furth, X. Wen, J. P. Katz, R. K. Sellon, D. G. Silberg, T. M. Antalis, C. W. Schueinfest, and G. D. Wu

G1445

HORMONES AND SIGNALING

Cholinergic ion secretion in human colon requires coactivation by cAMP

M. Mall, M. Bleich, M. Schürlein, J. Kühr, H. H. Seydelwitz, M. Brandis, R. Greger, and K. Kunzelmann

G1274

IGFBP-3 and IGFBP-5 production by human intestinal muscle: reciprocal regulation by endogenous TGF- β 1 <i>T. L. Bushman and J. F. Kuemmerle</i>	G1282
Hepatic production and intestinal uptake of IGF-I: response to infection <i>C. H. Lang, R. A. Frost, J. Ejiofor, D. B. Lacy, and O. P. McGuinness</i>	G1291
Dopamine-dependent inhibition of jejunal Na^+/K^+ -ATPase during high-salt diet in young but not in adult rats <i>M. A. Vieira-Coelho, V. A. L. Teixeira, Y. Finkel, P. Soares-da-Silva, and A. M. Bertorello</i>	G1317
Segment-specific effects of epinephrine on ion transport in the colon of the rat <i>S. Hörger, G. Schultheiß, and M. Diener</i>	G1367
Early NF- κ B activation is associated with hormone-induced pancreatitis <i>I. Gukovsky, A. S. Gukovskaya, T. A. Blinman, V. Zaninovic, and S. J. Pandol</i>	G1402
hCG: its pancreatic and duodenal receptors and in vivo electrolyte secretion in female rats <i>N. S. Panesar and C. W. Poon</i>	G1430
Cellular distribution of secretin receptor expression in rat pancreas <i>C. D. Ulrich II, P. Wood, E. M. Hadac, E. Kopras, D. C. Whitcomb, and L. J. Miller</i>	G1437

NEUROREGULATION AND MOTILITY

Migrating motor complex cycle duration is determined by gastric or duodenal origin of phase III <i>Y. C. Luiking, A. C. van der Reijden, G. P. van Berge Henegouwen, and L. M. A. Akkermans</i>	G1246
Endogenous cholecystokinin in postprandial lower esophageal sphincter function and fundic tone in humans <i>F. Zerbib, S. Bruley des Varannes, C. Scarpignato, V. Leray, M. D'Amato, C. Rozé, and J.-P. Galmiche</i>	G1266
Regional and transmural density of interstitial cells of Cajal in human colon and rectum <i>R. Hagger, S. Gharaie, C. Finlayson, and D. Kumar</i>	G1309
Modulation of cholinergic neuromuscular transmission by nitric oxide in canine colonic circular smooth muscle <i>M. G. Rae, M. A. Khoyi, and K. D. Keef</i>	G1324
Impact of fundoplication on bolus transit across esophagogastric junction <i>P. J. Kahrilas, S. Lin, A. E. Spiess, J. G. Brasseur, R. J. Joehl, and M. Manka</i>	G1386
Short-chain fatty acids modify colonic motility through nerves and polypeptide YY release in the rat <i>C. Cherbut, L. Ferrier, C. Rozé, Y. Anini, H. Blottière, G. Lecannu, and J.-P. Galmiche</i>	G1415
Rho A regulates sustained smooth muscle contraction through cytoskeletal reorganization of HSP27 <i>P. Wang and K. N. Bitar</i>	G1454

LIVER AND BILIARY TRACT

Functional polarity of Na^+/H^+ and $\text{Cl}^-/\text{HCO}_3^-$ exchangers in a rat cholangiocyte cell line <i>C. Spirli, A. Granato, A. Zsembery, F. Anglani, L. Okolicsányi, N. F. LaRusso, G. Crepaldi, and M. Strazzabosco</i>	G1236
L-selectin and ICAM-1 mediate reperfusion injury and neutrophil adhesion in the warm ischemic mouse liver <i>S. S. Yadav, D. N. Howell, W. Gao, D. A. Steeber, R. C. Harland, and P.-A. Clavien</i>	G1341
Aggravating action of zymosan on acute liver damage in perfused liver of rats treated with D-galactosamine <i>T.-X. Cui, M. Iwai, T. Yamauchi, and T. Shimazu</i>	G1361
Zonal differences in effects of HGF/SF and EGF on DNA synthesis in hepatocytes under fed or starved conditions <i>K. Imai, T. Mine, M. Tagami, K. Hanaoka, and T. Fujita</i>	G1394

The Journal no longer publishes print subject and author indexes. Full searchability is available in the online version (<http://www.ajpgi.org>).

NOTICE

The *American Journal of Physiology: Gastrointestinal and Liver Physiology* wishes to acknowledge the extensive use of material reproduced from the *Biochemical Journal* (322: 1–13, 1997; © the Biochemical Society) in the Invited Review by E. F. Grady, S. K. Böhm, and N. W. Bennett, "Turning off the signal: mechanisms that attenuate signaling by G protein-coupled receptors" [Am. J. Physiol. 273 (Gastrointest. Liver Physiol. 36): G586–G601, 1997].

